

Preliminary Amendment
U.S. Appln. No. 09/897,495

REMARKS

Entry and consideration of this Amendment is respectfully requested.

Respectfully submitted,



Mainak H. Mehta
Registration No. 46,924

SUGHRUE MION, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, D.C. 20037-3213
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

Date: January 28, 2002

APPENDIX
VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

The specification is changed as follows:

Page 4, first full paragraph:

Each ingress router I_1 of the second domain B uses the SLA information to compute the estimated volume of class-specific traffic between the ingress router I_1 and all egress routers $[E_2, E_3] \underline{E_1}, \underline{E_2}$ in the same domain, to create an $N \times N$ matrix M , where N represents the number of edge routers in the domain. The (i,j) -th element of the traffic matrix for a given class represents the total bandwidth used by that given class from ingress router i to egress router j . For example, as illustrated in Figure 1, for the second domain B , element $(1,1)$ of the matrix M equals λ_1 , and element $(1,2)$ of the matrix equals λ_2 . Once constructed, the traffic matrices are used to compute the provisioning routes (e.g., paths), for each non-zero element of those matrices, and the computed paths are pinned down using multi-protocol label switching (MPLS) for Diffserv networks or multi-protocol lambda switching (MP λ S) for optical networks.

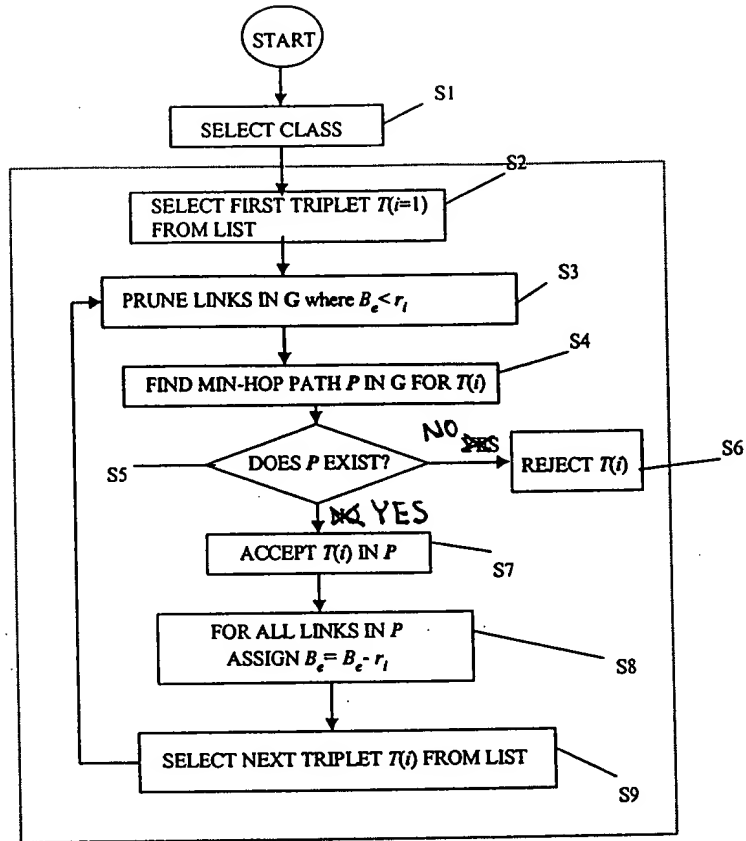
Page 6, after equation (4), please insert the following paragraph:

--V represents the total amount of bandwidth of accepted flows, and W represents the total amount of bandwidth of all flows.--

Page 16, second full paragraph:

Accordingly, in the next step S21, M is defined as the subset of those already accepted (i.e., during the previous $i-1$ steps) quadruplets $T(1), \dots, T(i-1)$ for which the following two

conditions hold true. First, the bit $[r_j]b_i$ of quadruplet $T(j)$ is TRUE and the path $SPA(j)$ thus can be altered. Second, all links e in Q belong to the path $SPA(j)$: $Q \subset SPA(j)$. Therefore, if the bandwidth reservation for r_j of the quadruplet $T(j)$ for its path $SPA(j)$ is removed, the available bandwidth at each link e in Q increases by r_j . Since the i^{th} flow requires bandwidth reservation of $r_i \leq r_j$, this increase is sufficient for accommodating the i^{th} flow using its path $SPI(i)$.



PRIOR ART

Figure 2

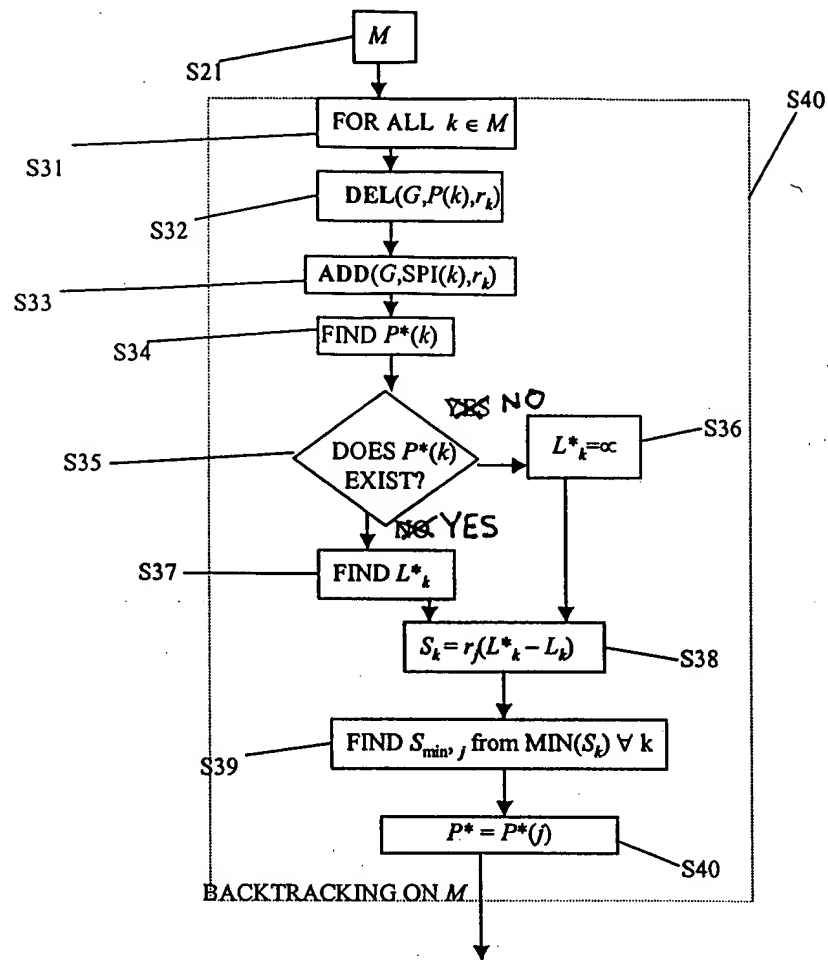


Figure 6